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IN THE UNITED STATES PATENTS AND TRADEMARK OFFICE

NIF-107

Applicant : Kazuyoshi Koizumi et al.

Title : ROTARY DAMPER

Serial No. : 10/572,378

Filed : March 16, 2006

Group Art Unit : 3683

Examiner : Mahbubur Rashid

Commissioner for Patents
U.S. Patents and Trademarks Office
Attention: BOARD OF PATENT APPEALS AND INTERFERENCES

December 6, 2010

APPEAL BRIEF

Sir:

Further to the Notice of Appeal, an Appeal Brief is filed herewith. A credit card authorization form in the amount of $540.00 is attached for the Appeal Brie fee.

This brief contains the following items in the order set forth below (37 C.F.R. § 41.37(c))

I. Real Party in Interest.
II. Related Appeals and Interferences.
III. Status of Claims.
IV. Status of Amendments.
V. Summary of Claimed Subject Matter.
VI. Grounds of Rejection to be Reviewed on Appeal.
VII. Argument.
VIII. Claims Appendix.
IX. Evidence Appendix.
X. Related Procedures Appendix.

I. REAL PARTY IN INTEREST

The real party of interest is:

NIFCO INC.
184-1 MAIOKA-CHO, TOTSUKA-KU
YOKOHAMA-SHI 244-8522
JAPAN

As demonstrated by the assignment recorded at reel/frame 017713/0942 on March 16, 2006.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application:

There is a total of 9 claims in the application, which are identified as claims 8-16.

B. Status of all the claims:

1. Claims cancelled: 1-7
2. Claims withdrawn from consideration but not cancelled: none
3. Claims pending: claims 8-16
4. Claims allowed: none
5. Claims rejected: 8-16
6. Claims objected to: none
7. Claims on Appeal: 8-16

IV. STATUS OF AMENDMENTS

A non-final Office Action was issued on April 28, 2009. An Amendment was filed on August 24, 2009 wherein the claims were amended in a manner that overcame the anticipation rejection based on JP '760. A final Office Action was issued on December 9, 2009

maintaining a rejection under § 103. A response to this action was filed on April 29, 2010, wherein the claims were maintained without amendment and the shortcomings of the rejection were pointed out. An RCE was filed on June 7, 2010 in response to an Advisory Action dated May 17, 2010. A paper correcting the translation of JP '760 was filed with the RCE.

A non-final Office Action was issued on June 22, 2010 and was followed by the filing of a Notice of Appeal on October 5, 2010.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 8 calls for a rotary damper comprising:

a housing (Fig. 1, 11, page 5, line 26) ;

a viscous fluid (21, page 5, line 26) housed inside the housing;

a rotor (31, Figs. 1 and 2, page 5, line 27) disposed inside the housing and having an axial portion (32, Figs. 1 and 2, page 5, line 29) projecting from the housing, and a circular resistive portion (36, Figs. 1, 2 and 3, page 5, line 29) which moves through said viscous fluid inside said housing, said rotor having a smooth outer periphery extending continuously without interruption and flat upper and lower surfaces without a projection (Figs. 1 and 2); and

a sealing member (61, Fig. 1, page 6, line 1) preventing said viscous fluid from leaking between said axial portion and said housing,

wherein said resistive portion includes multiple air retention portions (37, Figs. 1-3, page 7, lines 10-16) provided annularly and intermittently around the axial portion thereof, and said housing has an air movement passage (38, Figs. 1-3, page 7, lines 10-16) connecting two of the air retention portions, each of said air retention portions being formed by an elongated through-bore (37) completely surrounded by a periphery.

Independent claim 11 calls for a rotary damper comprising:

a housing (11);

a viscous fluid (21) housed inside the housing;

a rotor (31, Figs. 1 and 2, page 5, line 27) disposed inside the housing (11) and having an axial portion (32) projecting from the housing (11), and a circular resistive portion (36, Figs. 1, 2 and 3, page 5, line 29) which moves through said viscous fluid inside said housing, said resistive portion having a smooth outer

periphery extending continuously without interruption and flat upper and lower surfaces without a projection (Figs. 1 and 2); and

a sealing member (61) preventing said viscous fluid from leaking between said axial portion and said housing (11),

wherein said resistive portion includes multiple air retention portions (37, Figs. 1-3, page 6, line 16-20, page 9, lines 20-26) provided annularly and intermittently around the axial portion, and said housing (11) includes a circumferential annular groove (13a, Fig. 1, page 6, lines 16-20)) facing the air retention portions and operating as an air movement passage connecting two of the air retention portions (37).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The sole ground of rejection to be reviewed is the rejection of claims 8-16 under 35 U.S.C. § 103(a) as being unpatentable over JP '760 in view of Sugasawara et al.

VII. ARGUMENT

The rejection of claims 8-16 under 35 U.S.C. § 103(a) as being unpatentable over JP '760 in view of Sugasawara et al. is submitted as being untenable and would not lead to the claimed subject matter. A reversal of this rejection is respectfully solicited.

The rotary damper in independent claims 8 and 11 comprises a housing, a viscous fluid housed inside the housing, a rotor, and a sealing member. The rotor is disposed inside the housing, and has an axial portion projecting from the housing and a circular resistive portion which moves through the viscous fluid inside the housing. The sealing member prevents the viscous fluid from leaking between the axial portion and the housing.

In the claimed subject matter, the rotor has a smooth outer periphery extending continuously without interruption, and flat upper and lower surfaces without a projection. Also, the resistive portion includes multiple air retention portions provided annularly and intermittently around the axial portion thereof.

In claim 8, it is further clarified that the housing has an air movement passage connecting two of the air retention portions, each of said air retention portions being formed by an elongated through-bore completely surrounded by a periphery.

In claim 11, it is further clarified that the housing includes a circumferential annular groove facing the air retention portions and operating as an air movement passage connecting two of the air retention portions.

In traverse of the above rejection, it is pointed out that the Office Action dated June 22, 2010, the Examiner has indicated (see page 6 of the Office Action) that the Appellants use the term "comprising" "and thus the examiner has given the broadest interpretation of the claimed limitations." This indicates a complete confusion between the non-exclusivity of an open ended claim and the mandates of the § 103 statute. The terminology used in the transition phrase has nothing to do with claim interpretation. Indeed, it appears that the Examiner is assuming that the requirements of the § 103 stature which, as stated at the beginning of the rejection, requires that the subject matter as a whole to have been obvious to a person having ordinary skill in the art to which the subject matter pertains, can be largely ignored if a claim contains the term "comprising." There is no justification for this position.

This position would also explain the quasi §102 analysis of what is disclosed in the cited art and the strained position that the top and lower edges of the annular flange-like projections 21a, 21b disclosed in the JP '760 reference, are respectively a "flat upper surface without a projection" and a "flat lower surface without a projection." The fact that the Examiner believes that the reader of ordinary skill, when reviewing the JP '760 reference, would come to this conclusion is in itself sufficient to demonstrate that there is a serious lack of underlying sense and tenability in the formulation of this § 103 rejection.

It is submitted that there is no rational reason for the reader of ordinary skill to not correctly draw the conclusion that 20b and 21a are narrow recesses and projections provided on the surface of circular plate member 21 (see page (2) column 2, lines 1-6 of JP '760) as per the disclosure of JP '760. Indeed, there is no reason advanced that allows the Examiner to ignore the

disclosure of the circular plate member 21. After all, this circular plate member 21 is the element in the JP '760 arrangement from which each of the three axial flange-like portions and the axial portion all project.

In more detail, the inventive damper disclosed in JP '760 includes a casing 20, and a rotor 30. The rotor 30 includes a circular base, a plurality of annular flange-like projections 30a projecting upwardly and downwardly from a circular base to form concaves 30b between the projections 30a, and communication holes 30c formed in the base. The casing 20 includes projections 20b forming chambers 20a. The projections 30a are located in the chambers 20a of the casing 20.

In this reference, Figs. 5 and 6 depicts the prior art which is disclosed.

In the rejection, the first of the labeled figures depict the prior art (Figs. 5 and 6 of JP '760) while the second labeled figure depicts the claimed embodiment of JP '760 (Figs. 1-4). As best understood, the rejection takes the outermost of the projections of both of the arrangements illustrated in the rejection as being the claimed circular resistive portion. This appears to be mandated by the Examiner's labeling of the JP '760 prior art (first figure) where only the outmost of the three flange-like arrangements can possibly have a smooth outer periphery without projections.

Now, if this is taken to be the circular resistive portion set forth in claims 8 and 11, the requirement that the resistive portion includes multiple air retention portions cannot be met even by second labeled drawing (Fig. 1 of JP '760) provided in the rejection. That is to say, the through holes 30c which presumably are being taken as the multiple air retention portions (the disposition or existence of the claimed air movement passages being unclear), are formed in a structure which is associated with but separate from that which is being taken as the circular resistive

portion with a smooth outer periphery. The same is clearly the case with the first labeled drawing in the rejection where, possibly through inadvertence, the air retention portions appear to be designated as being portions of the circular base plate 30 located between the annular flange-like projections. The rejection is deemed defective for at least these reasons.

This rejection is further deemed defective in that the Examiner admits that the JP '760 fails to disclose either the circumferential extension arc shape or an elongated through-bore of the air retention portion as claimed. To overcome this admitted shortcoming, the Examiner turns to the elongated through bore 6c shown in Fig. 5c of Sugasawara et al.

In Sugasawara et al., a rotary shaft 2 having rotatable discs 6, is located in a casing 1 having fixed discs 7. Each of the rotatable discs 6 is located between two fixed discs 7. The movable disc 6 is provided with the arc-shaped slits 6c, which is disclosed as accelerating the flow of viscous liquid from the circumferential area to the central area of the casing when the disc is turned in the direction of the arrow with rotary shaft 2 in order to ensure a smooth movement of viscous liquid among the discs (see column 11, lines 16-22). Accordingly, the arc-shaped slit 6c extends from the circumferentially outer side to the inner side, as clearly shown in Fig. 5c.

In the claimed invention, the resistive portion of the rotor includes multiple air retention portions provided annularly and intermittently around the axial portion thereof. However, the arc-shaped slits 6c in Sugasawara et al. are not formed as in the claimed invention. Indeed, the arc-shaped slits 6c are formed to ensure smooth movement of a viscous fluid, not to function as air retention portions as required by the claimed subject matter. This fact would not go unnoticed by the reader of ordinary skill who is

required to consider the disclosure of each reference as a whole and for all that it teaches.

Further, Sugasawara et al. does not have an air movement passage connecting two of the air retention portions, each of the air retention portions being formed by an elongated through-bore completely surrounded by a periphery (claim 8), or annular groove facing the air retention portion and operating as an air movement passage connecting two of the air retention portions (claim 11). Therefore, the features of claims 8 and 11 are neither disclosed in nor suggested by Sugasawara et al.

Moreover, in order for the reader of ordinary skill to consider the allegedly obvious transfer of teachings, the reader would have to ignore the clear disclosure that the circular plate member 21, which forms part of the prior art disclosed in JP '760 (or circular plate 30 of the inventive embodiment of JP '760), is a major element of the arrangements disclosed in JP '760, and somehow devises a way to consider the outermost of the flange-like annular ring-shaped structures 21a (30a) in total isolation and then consider transferring the structure from a disc-shaped structure (see Fig. 5c of Sugasawara et al.) to an annular wheel or ring-shaped one, to provide a function which the rejection advances that Sugasawara et al. discloses is to accelerate the flow of viscous liquid to ensure the smooth flow of same (which JP '760 fails to suggest is necessary).

The Appellants submit that this would be essentially impossible and to be such that a *prima facie* case of obviousness cannot be established for at least the reasons advanced above.

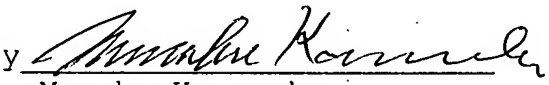
As explained above, the pending claims are neither disclosed in nor suggested by the cited references taken alone or in combination. Indeed, even if the cited references are combined, the pending claims are not rendered obvious by their disclosures when taken as a whole in accordance with the § 103 statute.

In conclusion, it is submitted that the claims as they stand before the PTO are allowable over the art and that the rejection made by the Examiner should be reversed.

If for any reason, this Appeal Brief is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned, Applicant's attorney of record.

Respectfully Submitted,

KANESAKA BERNER & PARTNERS

By 

Manabu Kanesaka
Reg. No. 31,467
Agent for Applicants

1700 Diagonal Road, Suite 310
Alexandria, VA 22314
(703)519-9785

VIII. CLAIMS APPENDIX

8. A rotary damper comprising:

a housing;

a viscous fluid housed inside the housing;

a rotor disposed inside the housing and having an axial portion projecting from the housing, and a circular resistive portion which moves through said viscous fluid inside said housing, said rotor having a smooth outer periphery extending continuously without interruption and flat upper and lower surfaces without a projection; and

a sealing member preventing said viscous fluid from leaking between said axial portion and said housing,

wherein said resistive portion includes multiple air retention portions provided annularly and intermittently around the axial portion thereof, and said housing has an air movement passage connecting two of the air retention portions, each of said air retention portions being formed by an elongated through-bore completely surrounded by a periphery.

9. A rotary damper according to claim 8, wherein said resistive portion has radially inner and outer portions relative to the air retention portions, said radially inner and outer portions being located in a same plane.

10. A rotary damper according to claim 9, wherein said resistive portion has a disc shape with the air retention portions therein extending circumferentially in an arc shape.

11. A rotary damper comprising:

a housing;

a viscous fluid housed inside the housing;

a rotor disposed inside the housing and having an axial portion projecting from the housing, and a circular resistive portion which moves through said viscous fluid inside said housing, said resistive portion having a smooth outer periphery extending continuously without interruption and flat upper and lower surfaces without a projection; and

a sealing member preventing said viscous fluid from leaking between said axial portion and said housing,

wherein said resistive portion includes multiple air retention portions provided annularly and intermittently around the axial portion, and said housing includes a circumferential annular groove facing the air retention portions and operating as an air movement passage connecting two of the air retention portions.

12. A rotary damper according to claim 11, wherein said resistive portion has one radially inner and one radially outer portion relative to the air retention portions, said radially inner and outer portions being located in a same plane.

13. A rotary damper according to claim 12, wherein said resistive portion has a disc shape with the air retention portions therein extending circumferentially in an arc shape.

14. A rotary damper according to claim 13, wherein said circumferential groove directly faces the air retention portions of the resistive portion in the disc shape without extending outwardly of the resistive portion.

15. A rotary damper according to claim 11, wherein said housing includes an additional annular groove at a side opposite to the annular groove facing the air retention portions.

16. A rotary damper according to claim 15, wherein said housing includes a flat portion having the circumferential annular groove in a middle thereof.

IX. EVIDENCE APPENDIX

None

X. RELATED PROCEEDINGS APPENDIX

None - There are no related proceedings